

**Stratton Lumber, Inc.**  
**Franklin County**  
**Stratton, Maine**  
**A-9-71-M-R/A**

**) Departmental**  
**) Findings of Fact and Order**  
**) Air Emission License**

After review of the Air Emissions License renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

**I. REGISTRATION**

**Introduction**

- A. Stratton Lumber, Inc. (Stratton) of Stratton, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their Stratton, Maine lumber mill.
- B. The renewal of the Stratton license shall include an amendment to increase the facility's licensed annual kiln through-put restriction.
- C. Stratton is authorized to operate the following equipment:

**Fuel Burning Equipment**

<b><u>Equipment</u></b>	<b><u>Maximum Capacity (MMBtu/hr)</u></b>	<b><u>Maximum Firing Rate (tons/hr)</u></b>	<b><u>Fuel Type</u></b>	<b><u>Control Device</u></b>	<b><u>Stack #</u></b>
Boiler #1	22.5	2.5	wood	Multi-cyclones	1

**Process Emissions Sources**

<b><u>Equipment</u></b>	<b><u>Unit Capacity</u></b>	<b><u>Pollution Control Equipment</u></b>
Kiln #1	240,000 BF	none
Kiln #2	180,000 BF	none
Kiln #3	180,000 BF	none
Edgings Chipper Cyclone	na	none
Planer Shavings Cyclone	na	none
Sawmill Sawdust Cyclone	na	none
Fuel Silo Cyclone	na	none

#### D. Application Classification

The application for air emission license renewal for Stratton includes an amendment to include an increase in the facility's licensed kiln through-put restriction. The amendment to this license is determined to be a minor modification and has been processed as such. The application for Stratton is considered to be a renewal and amendment.

Although the amendment is a minor modification, Stratton will become a major source of VOC emissions as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 1, 2005) and will be required to submit an initial Part 70 Air Emission License application by November 1, 2009.

## II. BEST PRACTICAL TREATMENT (BPT)

#### A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in 06-096 CMR 100. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in 06-096 CMR 100. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

#### B. Boiler #1

Stratton operates Boiler #1 for facility heat, hot water and drying kiln steam. Boiler #1 was installed in 1989 and has a design heat input capacity of 22.5 MMBtu/hr firing wood. Particulate matter emissions from the boiler are controlled by two, in series, multiple centrifugal separators ("multiclones"). The multiclones have been modified to incorporate a fly ash reinjection system.

In 2005, Stratton retrofit the boiler with an over-fire combustion air system (secondary air) that supplies combustion air into multiple locations along the length of the furnace combustion chamber above the fuel chutes. The improvements did not affect the currently licensed design heat input capacity of 22.5 MMBtu/hr. Stratton proposed that the upgrades to Boiler #1 resulted in higher combustion efficiencies, therefore improving overall boiler emissions.

A summary of the BPT analysis for boiler #1 (22.5 MMBtu/hr) is as follows:

1. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103, (last amended November 3, 1990) regulates PM emission limits. Maine's rule 06-096 CMR 103 establishes the PM emission limit of 0.3 lb/MMBtu when firing wood and shall be considered BACT. PM<sub>10</sub> emission limits are derived from PM limits.
2. NO<sub>x</sub> emission limits are based upon AP-42 data dated 7/01.
3. SO<sub>2</sub>, CO and VOC emission limits are based upon previously licensed emissions limits.
4. Visible emissions from Stack #1 are subject to *Visible Emissions Regulation*, 06-096 CMR 101 (last amended May 18, 2003). However, the visible emission standard established in Air Emission License A-9-71-J-A/R is more stringent and shall be considered BPT. Visible emissions from Stack #1 shall not exceed 20% opacity on a six-minute block average except, for no more than 2 six-minute block averages in a 3-hour period.

#### C. Drying Kilns

Stratton is currently licensed to operate three kilns for green lumber drying, designated Kilns #1, #2 and #3. Kiln #1 has an approximate capacity of 240,000 BF (board feet) per charge and Kilns #2 and #3 have approximate capacities of 180,000 BF per charge each.

The facility's current air emission license restricts throughput through the drying kilns to 90.0 million board feet per year (MMBF/yr) of a combination of spruce and fir based on a twelve-month rolling total, not to exceed drying a total of 25 MMBF/yr of fir per year based on a twelve-month rolling total. Approximately 70% to 80% of the wood dried is spruce and the vast majority of the spruce is red spruce. The balance of the wood dried is balsam fir.

Using a VOC emission factor for fir of 1.14 lb/MBF (pounds per thousand board feet) and a VOC emission factor for spruce of 0.77 lb/MBF, Stratton has a current licensed potential to emit 27.9 tons of VOC per year from kiln operations based on a twelve-month rolling total. Emissions factors were obtained from two University of Maine studies published in June 1997 and April 2000, respectively.

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Stratton is currently planning to modernize the mill which will result in a greater lumber yield. Improvements will include the replacement of log handling equipment, de-barkers and log feed-in system, as well as the installation of state-of-the-art laser scanning technology. Stratton is proposing to increase the facility's lumber drying production from 90.0 MMBF/yr to 120 MMBF/yr of a combination of spruce and fir based on a twelve-month rolling total, not to exceed drying a total of 35 MMBF/yr of fir per year based on a twelve-month rolling total.

Using the VOC emission factors for spruce and fir given above, Stratton Lumber, Inc. will increase the facility's licensed potential to emit VOC from kiln operations from 39.3 tons of VOC per year to 52.7 tons of VOC per year based on a twelve-month rolling total.

Stratton and their consultant, MacMillan & Donnelly, Inc. (M&D), submitted a BACT analysis for the wood drying kilns to the Department comparing the BACT requirements of other similar facilities as documented in the US EPA BACT/RACT/LAER clearing house. The analysis documented that BACT for the control of VOC emissions from wood drying kiln operations does not require any add-on control equipment. BACT consists of good kiln operation and maintenance practices.

**D. Cyclones**

There are several areas of the Mill where wood dust is potentially generated and the dust-laden air is captured and blown to a cyclone to separate the wood particles from the air. The mill's Four active cyclones are in the following locations: The Edgings Chipper Cyclone is located on the sawmill roof, the Fuel Silo Cyclone is located on top of the fuel storage silo and the Planer Shavings Cyclone and the Sawmill Sawdust Cyclone are located on the roof of the planer mill and sawmill sawdust storage bin.

Stratton Lumber, Inc. shall maintain a log of the condition of the cyclones and dust conveying equipment. Stratton Lumber, Inc. shall inspect operations of the cyclones and the dust conveying equipment once per month and record findings, and any repairs.

Visible emissions from any cyclone shall not exceed an opacity of 10% on a 6-minute block average basis, except for no more than 1 six-minute block average in a 1-hour period.

E. Annual Emission Restrictions

Stratton Lumber, Inc. is assessed fees based on the following annual emissions, based on a twelve-month rolling total:

- Boiler #1 emission potentials are calculated based on continuous year round operation.

**Total Allowable Annual Emission for the Facility**

<b>Pollutant</b>	<b>Tons/Year</b>		
	Boiler	Kilns	Total
PM	29.6	-	29.6
PM <sub>10</sub>	29.6	-	29.6
SO <sub>2</sub>	2.0	-	2.0
NO <sub>x</sub>	21.7	-	21.7
CO	98.6	-	98.6
VOC	9.9	52.7	62.6

**III.AMBIENT AIR QUALITY ANALYSIS**

According to *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 1, 2005), the level of air quality analyses required for a minor source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source. Based on the total facility emissions, Stratton is below the emissions level required for modeling and monitoring.

**ORDER**

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-9-71-M-R/A subject the following conditions:

Severability: The invalidity or unenforceability of any provision, or part thereof, of this Air Emission License shall not affect the remainder of the provisions or any other provisions. This Air Emission License shall be construed and enforced in all respects as of such invalid or unenforceable provision or part thereof had been omitted.

**STANDARD CONDITIONS**

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in 06-096 CMR 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]

- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
    - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
    - b. pursuant to any other requirement of this license to perform stack testing.
  - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
  - (iii) submit a written report to the Department within thirty (30) days from date of test completion.  
[06-096 CMR 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and

- (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
- (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions. [06-096 CMR 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [06-096 CMR 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

#### **SPECIFIC CONDITIONS**

- (16) Boiler #1
- A. Stratton shall operate Boiler #1 so as not to exceed an operating capacity of 22.5 MMBtu/hr. [06-096 CMR 115, BPT]
- B. Stratton shall continue to operate and maintain two multiple centrifugal separators (multiclones) in series for particulate control.  
[06-096 CMR 115, BPT]



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C. Emissions shall not exceed the following:

<b>Equipment</b>		<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>
Boiler #1	lb/MMBtu	0.3	-	-	-	-	-
	lb/hr	6.8	6.8	0.45	5.0	22.5	2.3

[06-096 CMR 115, BPT]

D. Visible emissions from stack #1 shall not exceed 20% opacity on a (6) six-minute block average, except for no more than 2 six-minute block averages in a 3-hour period. [A-9-71-J-A/R, 06-096 CMR 115, BPT]

(17) **Drying Kilns**

A. Stratton shall be limited to drying 120.0 MMBF/yr of spruce and fir at their Stratton, Maine facility based on a twelve-month rolling total.  
[06-096 CMR 115, BPT]

B. Stratton shall be limited to drying no more than 35.0 MMBF/yr of fir at their Stratton, Maine facility based on a twelve-month rolling total.  
[06-096 CMR 115, BPT]

C. Stratton shall maintain a record of wood drying. The record shall include the quantity of wood dried and indicating the species of wood dried. The record shall be maintained on a monthly as well as a twelve-month rolling total.  
[06-096 CMR 115, BPT]

D. Prior to drying any other species of wood in the kilns, Stratton Lumber, Inc. shall contact the Department to assess whether any modifications need to be made to this air emission license. [06-096 CMR 115, BPT]

(18) As a result of the increased potential annual VOC emissions, Stratton will become a major source of VOC emissions as defined in 06-096 CMR 100 and Stratton shall be required to submit an initial Part 70 Air Emission License application by November 1, 2009. [06-096 CMR 100, 06-096 CMR 115, 06-096 CMR 140]

(19) **Cyclones**

A. Stratton Lumber, Inc. shall operate and maintain the cyclones in a manner that minimizes emissions from the cyclones. [06-096 CMR 115, BPT]

B. Visible emissions from any cyclone shall not exceed opacity of 10% on a 6-minute block average basis, except for no more than 1 six-minute block average in a 1-hour period. [06-096 CMR 101]

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- C. Stratton Lumber, Inc. shall maintain a log of the condition of the cyclones and dust conveying equipment. [06-096 CMR 115, BPT]
- D. Stratton Lumber, Inc. shall inspect operations of the cyclones and the dust conveying equipment once per month and record findings and any repairs in the cyclone log. [06-096 CMR 115, BPT]
- (20) Potential sources of fugitive PM emissions including material stockpiles and unpaved roadways shall be controlled by wetting with water, with calcium chloride, or other methods as approved by the Bureau of Air Quality to prevent visible emissions in excess of 10% opacity on a 3-minute block average basis. [06-096 CMR 101]
- (21) Visible emissions from any general process source shall not exceed an opacity of 20% on a 6-minute block average basis, except for no more than one 6-minute block average in a 1-hour period. [06-096 CMR 101]
- (22) Annual Emission Statement

In accordance with *Emissions Statements*, 06-096 CMR 137 (last amended July 6, 2004), the licensee shall annually report to the Department by July 1, the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department;  
or
- 2) A written emission statement containing the information required in 06-096 CMR 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator  
Maine DEP  
Bureau of Air Quality  
17 State House Station  
Augusta, ME 04333-0017

Phone: (207) 287-2437

[06-096 CMR 137]

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- (23) Stratton shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).

DONE AND DATED IN AUGUSTA, MAINE THIS                      DAY OF                      2008.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: \_\_\_\_\_  
DAVID P. LITTELL, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

The term of this Order shall be for five (5) years from the signature above

Date of initial receipt of application: **September 7, 2007**

Date of application acceptance: **October 9, 2007**

Date filed with the Board of Environmental Protection: \_\_\_\_\_

This Order prepared by, Peter G. Carleton, Bureau of Air Quality